METHOD AND APPARATUS FOR MASSIVELY PARALLEL
CONFIGURATION OF FPGAS

ABSTRACT OF THE DISCLOSURE

A programmable device with an improved system for loading configuration data compresses configuration data by composing configuration data out of pairs of control words and data words. The configuration data is divided into configuration words. Each configuration word is further divided into a number of configuration blocks. In a control word/data word pair, the control word determines which configuration blocks in the configuration word will be loaded with the data word. Each configuration block designated by the control word will be simultaneously loaded with the data word. By taking advantage of the symmetry within the control word, typically only a small number of control word/data word pairs will be required to load a complete control word. If a given control word does not have sufficient symmetry, the programmable device can instead use an alternate system for loading the configuration word.

SF 1476946 v2